

**Notice of Allowability**

Application No.	Applicant(s)
09/966,880	HONJO, TASUKU ET AL
Examiner	Art Unit
Sheridan L. Swope	1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to responses of November 23, 2003 and March 22, 2004.
2.  The allowed claim(s) is/are 1-4,9-12,14-17,34-37,50-52,54,56,57,60-70,73,74,77-80,87,88,95-97,99 and 101-114.
3.  The drawings filed on September 28, 2001 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 1003
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

**DETAILED ACTION**

Applicant's responses, on November 23, 2003 and March 22, 2004, to the First Action on the Merits of this case mailed July 31, 2003, are acknowledged. It is acknowledged that applicants have cancelled Claims 5-8, 13, 18-33, 38-49, 53, 55, 58, 59, 71, 72, 75, 76, 81-86, 89-94, 98, 100, amended Claims 2, 34-37, 50-52, 57, 60, 63, 64, 95-97, and 99, and added New Claims 102-114. Claims 1-4, 9-12, 14-17, 34-37, 50-52, 54, 56, 57, 60-70, 73, 74, 77-80, 87, 88, 95-97, 99, and 102-114 are pending: Claims 34 and 35 were previously withdrawn and Claims 102-112 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected Inventions. Claims 1-4, 9-12, 14-17, 34-37, 50-52, 54, 56, 57, 60-70, 73, 74, 77-80, 87, 88, 95-97, and 99 are hereby reconsidered and Claims 113 and 114 are considered on their Merits.

*Rejoinder*

Claim 1 is an allowable generic claim encompassing the non-elected species of the polynucleotide of SEQ ID NO: 35; thus, Claim 34 is rejoined. Claim 63 is an allowable generic claim encompassing the non-elected species of the polynucleotides of SEQ ID NO: 12-14; thus, Claims 104-106 and 109-111 are rejoined. Claim 113 is an allowable generic claim encompassing the non-elected species of the polynucleotide of SEQ ID NO: 10; thus, Claim 112 is rejoined.

In the interest of excellence in customer service, Claims 35, 102, 103, 107, and 108 are also rejoined.

***Allowable Subject Matter***

Claims 1-4, 9-12, 14-17, 34-37, 50-52, 54, 56, 57, 60-70, 73, 74, 77-80, 87, 88, 95-97, 99, and 101-114 are allowed.

The following is an examiner's statement of reasons for allowance:

All elected Claims, 1-4, 9-12, 14-17, 34-37, 50-52, 54, 56, 57, 60-70, 73, 74, 77-80, 87, 88, 95-97, 99, and 101-114, are limited to isolated nucleic acid molecules, vectors, host cells, and methods of making the encoded protein of the nucleotide sequence of SEQ ID NO: 7 or any polynucleotide encoding the amino acid sequence of SEQ ID NO: 8. In addition, the claims encompass three genomic DNA sequences for the polynucleotide of SEQ ID NO: 7, SEQ ID NOS: 9, 10, and 35, as well as the genomic exons for SEQ ID NO: 7, i.e. SEQ ID NOS: 11-15. The utility of polynucleotides encoding SEQ ID NO: 8, as encoding a cytidine deaminase, is credible based on the following. Applicants isolated a mouse polynucleotide that encodes cytidine deaminase activity as shown by heterologous expression and enzymatic analysis (Examples 1-6). The mouse cDNA was used to isolate a polynucleotide, SEQ ID NO: 7, from a human cDNA library (Example 15 and 16). The protein encoded by SEQ ID NO: 7, SEQ ID NO: 8, has 93% identity with the mouse cytidine deaminase (Fig 22). Furthermore, expression of the polynucleotide of SEQ ID NO: 7 in heterologous host cells and analysis by Western blotting showed that the protein encoded by SEQ ID NO: 7 is recognized by an antibody to mouse cytidine deaminase (Example 16). Therefore, the utility of the polynucleotides of SEQ ID NO: 7 or encoding SEQ ID NO: 8, as encoding a cytidine deaminase, is credible. Said cytidine deaminase is predicted to be important in RNA editing and, thus, is a potential target for therapeutic agents, especially regarding the immune response.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheridan L. Swope whose telephone number is 571-272-0943. The examiner can normally be reached on M-F; 9:30-7 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 571-272-0928. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Sheridan Lee Swope, Ph.D.

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